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# An echoing tone

Pitch accent parallels in Scandinavia and Scotland

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## Plan for today

- North Germanic pitch accent
  - Standard systems: ‘accent 1’ and ‘accent 2’
  - Extended systems: tone and apocope in Danish, Central Scandinavian circumflex
- The origins of North Germanic accents
- Parallel (?) developments in Scottish Gaelic
- Contact explanations?

## 1 North Germanic pitch accent

### 1.1 Standard systems

#### The pitch accent contrast

- Most varieties of Norwegian and Swedish show a *pitch accent* contrast in (main-)stressed syllables
- Traditionally:
  - Accent 1 (‘acute’): monosyllables, some polysyllables
    - ☞ Sw [ˈand] ‘duck’, [ˈanden] ‘the duck’
    - ☞ No [ˈvɑn:] ‘water’, [ˈvɑn:ə] ‘the water’
  - Accent 2 (‘grave’): some polysyllables
    - ☞ Sw [ˌanden] ‘the spirit’
    - ☞ No [ˌvɑn:ə] ‘to water’

### Some properties

- No contrast in monosyllables
- Accent 1: 'high tone' dialects (e. g. Northern Norway) vs. 'low tone' dialects (e. g. Eastern Norway)
- Accent 2: 'single peak' dialects (Eastern, Northern Norway, Southern Sweden) vs. 'double peak' dialects (Central Sweden, Trøndelag, Rogaland)

### Some controversies

- Age of the accent:
  - Proto-Nordic (Riad 1992, 1998, 2003)
  - Mediæval period (Oftedal 1952, Elstad 1980, Bye 2004)
- Which accent 2 is archaic?
  - Double peak (Kock 1885, d'Alquen & R. Brown 1992, Riad 1992, 1998, 2000, 2003, 2005)
  - Single peak (Elstad 1980, Bye 2004, 2011, Hognestad 2012)

### The origin of accent 2: Proto-Nordic hypothesis

- Basic insight: accent 2 is found in words that have undergone syncope
- Basic claim: the two peaks of accent 2 reflect a stress clash brought about by syncope
  - PN \*['(fo:)tiz] 'feet', \*['(herði)(jo:z)] 'shepherds'
  - Post-syncope: \*['(fø:)tiz], \*['(her)(ða:z)]
  - MNo <sup>1</sup>*føtter*, <sup>2</sup>*hyrder*
- Explanandum: why did the single-peaked systems lose their initial high tones?
- Explanation: in a H\*LHL accent, the second H drifts leftward and ousts the first H

### The origin of accent 2: mediæval hypothesis

- Basic insight: accent 2 appears in words that are polysyllabic in Old Scandinavian
- Basic claim
  - Accent 2 appears in disyllabic words because the peak drifts rightward by *peak delay*
  - When new disyllabic words arise from cliticization and epenthesis, there is a contrast
- For example
  - ON ['akr] 'field', ['dayr (inn)] '(that) day' with earlier peak
  - ON ['gata] 'way' with later peak
  - ['akr] ⇒ MNo <sup>1</sup>*aker* (early peak remains)
  - ['dayr inn] ⇒ MNo <sup>1</sup>*dagen* (early peak remains)
  - ['gata] ⇒ MNo <sup>2</sup>*gate* (late peak becomes accent 2)
- Explananda: two-peaked accent 2, low tone in accent 1
- Explanation: rightward drift of the peak frees up space in the initial syllable, onglides get reinterpreted as L and then H tones

## Questions for the mediæval hypothesis

- Riad (2005) presents some challenges to the mediæval hypothesis
- 1. Geographical distribution: Central Scandinavia cannot be an innovating area due to difficulties in communication, single-peak accent spreads by sea
- ☞ Bye (2011) argues against this
- 2. If single-peak accent is original, there is no account of Danish stød
- ☞ Hognestad (2007) presents an analysis
- 3. 'Vowel balance' depends on double-peaked accent and it is attested too early for double-peaked accent to have developed
- ☞ See Hognestad (2012) for some reflections
- ☞ Height-dissimilation phenomena similar to vowel balance are attested in languages with no double-peaked tonal accent (Russian, Irish, Welsh, Kera)

## The typological argument

- Another question:  
"Det har visserligen demonstrerats att tajmningen av en given intonation kan variera beroende på ordlängd [...], men man undrar varför denna typ av tonala kontraster inte uppstår oftare ur stavelseantalsskillnader." Riad 2005, p. 4
- Which takes us to today

## 1.2 Non-standard systems

### Tone and stød in Danish

- Instead of tonal accents, Danish has stød
- Some varieties (notably Funen; Andersen 1958) are described as having stød in 'free variation' with some sort of tonal accent
- See Ejsskjær (1990, 2006) for discussion
- These tones must be connected to the common North Germanic ones
- Here, I focus on apocope in Zealand Danish (Ringgaard 1960, Ejsskjær 1967, 1970, Larsen 1976)

### Apocope

- In many varieties of Danish, final [ə] in words like *hoppe*, *masse* is deleted (Hansen 1962, pp. 243–246)
  - Variable deletion: Funen (Andersen 1958), Standard Danish (Basbøll 2005)
  - Obligatory deletion: Jutland (Ringgaard 1960), Zealand (Larsen 1976)
- Basbøll 2005: ['mas] *masse* is not distinguishable from ['mas] *Mads*
- Not so in Zealand

## Incomplete neutralization

- ☞ Based on Ejskjær (1967), Larsen (1976)
  - A final [ə]-like portion might be present, but not at all frequently (not obvious this is an actual segment)
  - Contrast well preserved in sonorant-final words
    - *følg!* ['føl] vs. *følge* ['føl:]
    - *omvend!* [ʌm'vɛŋʔ] vs. *omvende* [ʌm,vɛŋ:]
  - When words do not end in a sonorant, the main distinction is *pitch*
    - *hop!* is ['hʌb] with a high-toned stressed syllable
    - *hoppe* is ['hʌb] with a 'smoother and later rise' („jævnere og senere rejsning“)
  - The pitch difference is also found in the sonorant-final case

## A new contrast?

- This is *not* described by the sources as a tonal accent contrast
- But that is what it essentially is: pitch reflects syllable count pre-apocope
- ☞ Just as under the mediæval hypothesis pitch reflects syllable count pre-epenthesis
  - The difference in the placement of the high tone is the same: the peak is *later* in *longer* words

## The circumflex accent

- The Zealand accent shows a hallmark of tonal behaviour: *stability*
- The segments go away, but the prosodic structure supporting the tone remains in place
- Another example of this is the so-called *circumflex accent*
- In a large area of Central Scandinavia (Trøndelag, Norrland, Österbotten, parts of Nordland), CVCV words undergo apocope, especially if the initial syllable was heavy in Old Scandinavian
- See Dahlstedt (1962), Liberman (1975), Apalset (1978), Elstad (1979), Dalen (1985), Kristoffersen (1992, 2011), Almberg (2001), Lorentz (2008)
- In some varieties, the distinction is not neutralized by the introduction of a different pitch accent in apocopated words
- Skogn (Dalen 1985): (*et*) <sup>1</sup>*kast* ≠ (*å*) *kâst*

## Tone and stability

- In some cases, the 'circumflex' looks essentially like a *truncated* accent 2: some of the tones associated with accent 2 fail to surface
- ☞ Salten, Lofoten (Lorentz 2008)
  - In others, the entire melody is pressed into the single stressed syllable
- ☞ Oppdal (Kristoffersen 2011)
  - Segments go away, but tones remain: another pitch accent born of syllable structure changes

## Interim summary

- The mediæval hypothesis for the origin North Germanic tonal accents (implicitly) predicts that changes in syllable structure may give rise to new tonal accent systems
- This prediction is correct within North Germanic
- A key mechanism is tonal stability: tonal changes lag behind changes in the segmental underpinnings of prosodic structure

## 2 Scottish parallels

### 2.1 Tonal accents in Scottish Gaelic

#### Tonal accents in Gaelic

- Many dialects of Gaelic show (near-)minimal pairs apparently distinguished by pitch alone
- (Oftedal 1956, Ternes 1980, 2006, MacAulay 1993, Ladefoged et al. 1998, Ladefoged 2003, M. Brown 2009)
  - *fitheach* ‘debt’ [¹fiɔx] vs. *fiach* ‘raven’ [²fiɔx]
  - *adha* ‘liver’ [¹a:] vs. *àth* ‘ford’ [²a:]
  - *balach* ‘boy’ [¹palʲax] vs. *balg* ‘bellows’ [²palʲak]
- This is sometimes seen as an example of Norse influence on Gaelic (Borgstrøm 1974)

#### More parallels

- Instead of a tonal contrast, varieties in Argyll show a sort of glottalization similar to Danish stød
- (Holmer 1938, 1954, 1962, Ternes 1980, Smith 1999, Jones 2000, 2006, 2010)
  - Arran *fitheach* [¹fiʔax] vs. *fiach* [¹fiax]
- Usually not seen as a borrowing *per se* but agreed to be a further development of the tonal system

#### Where does it come from?

- Accent 1 is associated with words that were disyllabic in Old Irish (or Norse): *fitheach*, *adha*, *balach*
  - Accent 2 is associated with words that used to be monosyllabic: *fiach*, *àth*, *balg*
- ☞ Have we heard this before?

### How does it work?

- For Lewis dialects, accent 1 is commonly described as a rise-fall and accent 2 as a rise throughout
- Ladefoged (2003): a *single melody* L\*H+L associated to different numbers of syllables (truncation of the trailing L in monosyllables)
- ☞ Have we heard this before?
  - M. Brown (2009) nuances this picture, but it is basically correct
    - The basic distinction between accent 1 and 2 is *not* in terms of different melodies
    - Instead, we have similar melodies placed differently within the same domain
    - Changes in segmental make-up (fricative deletion, epenthesis) do not affect tone placement
  - This is exactly parallel to North Germanic under the mediæval hypothesis
    - Single melody gives different tunes because of domain differences
    - Tonal stability

## 2.2 Tones and contact

### Is it a contact parallel?

- The parallels between the development of tonal accents in Scandinavia and Scotland are striking
- In the proposed reconstruction, the developments are typologically unremarkable and do not require contact
- This is even truer if we consider peak delay

### The story of stød

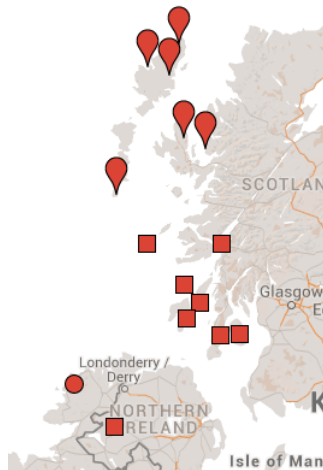
- The glottal stop in Argyll must come from an abrupt fall
- ☞ Similar proposals for Danish stød in Itô & Mester (1997), Riad (2000), Hognestad (2007)
- ☞ Stød is also found in East Ulster (Tyrone; Stockman & Wagner 1965, Hughes 1994) and further afield in Ireland
  - Why would there be a fall?
  - There must have been a high tone at the right edge of the stressed syllable
  - Lewis (M. Brown 2009): stressed syllables have L\* accent, any high tones are realized after the stress

### A proposal

- The patterns of tonal contrasts in the Gaelic languages may have developed along the following lines:
  - (Stage 0): H accent everywhere (Connacht, Munster; Dalton & Ní Chasaide 2007)

- Stage 1: H drifts rightward by peak delay: declarative rises (West Ulster; Dalton & Ní Chasaide 2005)
- Stage 2: H leaves the stressed syllable, L\* accent on stressed syllables (Lewis; M. Brown 2009)
- Stage 2a: H runs into a low tone to the right, the fall produces stød (Argyll, East Ulster)

### Mapping the proposal



- From an appropriately pan-Gaelic perspective, we find the expected picture of archaism at the periphery
- The most innovative area is the Argyll–East Ulster nexus across the North Channel (Dál Riata?)
- This makes historical sense!
- The tonal varieties on Lewis are not particularly innovative, so recourse to contact is not really necessary

### Conclusion

- The mediæval hypothesis for the origin of North Germanic tonal accents is attractive both empirically and theoretically
- The use of pitch to prevent neutralization of syllable count contrasts is found both in North Germanic and Gaelic

### Further questions

1. Given the existence of language contact in Scotland, has there *really* been no role for it in the appearance of tone?
2. Why is this type of tonal accent contrast so frequent in northern Europe but rare outside it?



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